



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-85B  
UNIQUE ID NUMBER: 6GE089  
COMBUSTOR: DAC II  
ENGINE TYPE: TF

BYPASS RATIO: 8.4  
PRESSURE RATIO ( $\pi_{00}$ ): 37.7  
RATED THRUST ( $F_{00}$ ) (kN): 395.3

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.9	20.2	70.9	4.2
AS % OF ORIGINAL LIMIT	4.5	17.1	61.5	26.1
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			76.8	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			86.1	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			95.4	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			108.2	

### DATA STATUS

- PRE-REGULATION  
x CERTIFICATION  
- REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
- DEDICATED ENGINES TO PRODUCTION STANDARD  
- OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
(ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)

x OUT OF PRODUCTION (DATE: - )  
- OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	3.115	0.04	0.12	47.25	3.3
CLIMB OUT	85	2.2	2.550	0.03	0.13	36.17	2.4
APPROACH	30	4.0	0.832	0.05	1.30	16.24	3.0
IDLE	7	26.0	0.282	0.46	14.10	5.86	2.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1107	228	6522	24177	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.6	16.5	61.2	3.3
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.0	0.4	0.2	0.6
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.53-0.61	16-16.75	60.9-61.33	2.73-4.01

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW)  
STAGE BLEED 0 (% CORE FLOW)

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.3-98.2
TEMPERATURE (K)	279.1-281.6
ABS HUMIDITY (kg/kg)	0.0022-0.0064

### FUEL

SPEC	Jet A
H/C	1.92
AROM (%)	17.4

MANUFACTURER: General Electric Company  
TEST ORGANIZATION: GE90 Eval Engineering  
TEST LOCATION: Site IIID, PTO, Peebles, OH  
TEST DATES: 09/01/2000-12/01/2000

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

### REMARKS

1. Ref. GE Report R97AEB298,
2. Engine S/N 900326
3. Turbomachinery incorporating 3D aero
4. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
5. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements:

- ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)